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1. Introduction

This paper examines the constraints proposed in the literature on how directed motion events may be expressed in Spanish compared to English. The results reported are the first outcome of a larger quantitative study of the restrictive role of the verb in Spanish expressions of directed motion.

Talmy's work on the typology of expressions of motion events has been, and still is, extremely influential in cognitive semantics, as well as among scholars of other theoretical orientations (see e.g., Beavers *et al.* 2010; Mateu Fontanals & Rigau 2002). One of his principal claims is that in a verb-framed language, such as Spanish, the Path of motion is expressed by the verb, while the Manner of motion is expressed outside the verb. Correspondingly, he claims that in a satellite-framed language, the Manner of motion is expressed by the verb, whereas the Path is expressed outside the verb, in a satellite (Talmy 1985, 1991, 2000). Some aspects of his typology, though, have been elaborated and other aspects need to be reconsidered. Most importantly, an extensive literature on the subject indicates that some languages do not seem to fit in his binary typology, and almost every language, to some degree, has to be judged as a mixed type (see, e.g., Aske 1989; Beavers *et al.* 2010; Berman & Slobin 1994; Croft *et al.* 2010; Gennari *et al.* 2002; Ibarretxe-Antuñano 2004a, 2004b; Pedersen 2009a; Slobin & Hoiting 1994; Slobin 1996, 1997, 2000, 2004; Talmy 2005; Zlatev & Yangklang 2004; among others).

Jon Aske's classic article (1989) on Path predicates in English and Spanish is an often cited paper and provides an important contribution to an elaboration of Talmy's typology. Firstly, we should recall that the comparison of English and Spanish from the very beginning has played a crucial role in Talmy's development of his typology. But more importantly, Aske's paper is not only a substantial contribution, among many others, to the continuous elaboration of the descriptive typological framework; it also aims to make advances toward explaining the typology. It addresses, by comparing English and Spanish, the question of why a language accepts, or fails to accept, lexicalization patterns other than its predominant one, in the domain of motion. More specifically, Aske examines under which circumstances in Spanish it is grammatically correct to express the Path of motion outside the verb, and why it is so. He suggests that the inability of Spanish to express the Path of motion in a satellite and the Manner in the verb, as claimed by Talmy, is limited to telic motion events with an endpoint. He explains this more narrow constraint by claiming that secondary predicates, i.e., complex predicates, are not allowed in Spanish.² This rule has later become closely associated with the *compounding parameter theory* (Snyder 2001). Recently it was noted that examples of telic Path phrases are sporadically evident in Spanish Manner verb expressions of directed motion (see Section 2, and Beavers *et al.* 2010 for an overview, and cited references).

These observations raise several questions. First, how can we, in a constructionist framework, account for the claim that complex predicates of motion are unacceptable in Spanish? Secondly, is it correct that Spanish cannot express telic motion events by an adverb or PP-phrase (satellite) combined with a Manner of motion verb? And if not, how should we understand this usage? To answer these questions on a methodologically solid basis, I have conducted a quantitative corpus-study of the possibility of combining Manner of motion verbs with telic Path phrases. In this paper, the preliminary results from this corpus study are reported. My primary aim was to determine whether such usage is merely sporadic, or whether it is quantitatively substantial. Secondly, I aimed to shed

¹ I owe thanks to two anonymous reviewers and to the editors of this volume for valuable criticism and comments on previous versions of this paper.

² When Aske (1989) talks about the unavailability of complex predicates, or secondary predicates, in Spanish, he refers to combinations of activity/manner verbs with telic phrases (secondary predicate) that indicate an end state/location, in expressions like: *Pat kicked the door open*, or *they ran to the beach*.

light on the role of the verbal predicate by examining the behaviour of a list of Manner of motion verbs in this construction.

It will be demonstrated that, in contrast to Aske's view, telic Path phrase expressions tend to be acceptable whenever the lexical meaning of the verb implies an element of directed motion. I suggest that the basic principles for the encoding of argument structure is a typological parameter and that the term *variable type framing* may accommodate the analyzed case of variation, together with a number of other problematic cases for the Talmian typology and related frameworks.

In the next sections, I briefly discuss previous research (Section 2). Secondly, I present a usage-based constructionist approach to the typology of motion events and other complex events (Section 3). Particularly, I introduce the term *variable type framing* (Section 3.3). Following this, I report results from a quantitative corpus study (Section 4). This leads to a final conclusion.

2. Manner of motion verbs in telic constructions - previous research

In his later work, Talmy posits a two-way typology, in which languages are classified as *verb-framed languages* and *satellite-framed languages*, referring to whether the basic meaning structure in expressions of complex events (*the main event/the framing event*) is encoded in the verb or outside the verb, respectively. Particularly, according to Talmy, in expressions of directed motion, some languages, like English, tend to lexicalize the main event, i.e., the Path of motion, in a satellite; whereas the co-event, i.e., the Manner of motion, is lexicalized by the verb. Other languages, like Spanish, tend to lexicalize the main event by the verb, and may express the co-event by adding an adverbial phrase. The following is the classic example used by Talmy:

- (1) The bottle floated into the cave
La botella entr-ó en la cueva flot-ando (Spanish: Talmy 1985)
the bottle enter-PST.3SG in the cave float-GERUND

In English, goal-oriented motion events are frequently expressed by the goal-marker *to*:

- (2) Peter ran to the bathroom

It is well known from the literature, and directly deducible from Talmy's typology, that Path encoding satellites in combination with Manner verbs are not typically found in verb-framed languages. Nevertheless, as first suggested by Aske (1989), what appears to be excluded in a verb-framed language, like Spanish, is only goal-marking satellites, as exemplified in (3):³

- (3) *??Nad-é a la isla (Spanish: Aske 1989)
swim-PST.1SG to the island
'I swam to the island'

According to Beavers *et al* (2010), the same constraint applies for Japanese, another verb-framed language:

- (4) *John-wa kishi-ni/de oyoida/tadayotta/hatta (Japanese: Beavers *et al*. 2010)
John-TOP shore-to/at swam/drifted/crawled

³ However, this particular usage is not impossible (see, for instance, example (19) in this paper); maybe, as pointed out by an anonymous referee, as an analogical extension of the much more frequent *hacia* ('toward') counterpart. Moreover, in many cases *hasta*, which is semantically closer to the goal-marker *a*, is an acceptable option as well as discussed below.

‘John swam/drifted/crawled to the shore’

In Spanish, it is possible to mark a boundary with the preposition *hasta* (‘until’) in directed-motion constructions involving Manner verbs:

- (5) Juan bail-ó hasta la puerta (Spanish: Aske 1989)
Juan dance-PST.PFR.3SG to(until) the door
‘Juan danced (all the way) to the door’

Hasta, thus, is a marker of delimitation that provides a boundary point on the event being described. Importantly, however, as Slobin & Hoiting (1994) point out, while this marker indicates a Path and a delimiting point, it does not entail boundary crossing, i.e., actually arriving at the goal. In this refined version, Talmy’s typology gets sensitive to the encoding of telic vs. atelic Paths, in the sense that a verb-framed language may allow Path satellites with Manner verbs, but it is constrained not to allow boundary-crossing Path satellites. This distinction between the notion of *boundedness* and *telicity*, understood as *boundary crossing*, is crucial, according to Slobin & Hoiting (1994). The prediction is that the preposition *a* is an unacceptable marker of goal in combination with Manner verbs because it entails boundary crossing, while *hacia* (‘toward’) and *hasta* (‘until’) are acceptable because they do not:⁴

- (6) María bail-ó hacia/hasta/??a la puerta (Spanish: Pedersen 2013)
María dance-PST.PFR.3SG toward/until/to the door
‘She danced toward/to/to the door’

Beavers *et al.* (2010), among others, point out that the telicity distinction in Aske’s proposal is not entirely clear. While the marker *hacia* (‘towards’) in (6) does not entail arrival, with *hasta* the figure does somehow reach the goal.⁵ Interestingly, Beavers (2008) identifies a distinction between *-ni* and *-made* (‘until’) in Japanese that is parallel to the distinction between *a* and *hasta* in Spanish, and between *à* and *jusque* in French. Beavers shows that in Japanese *-ni* is a general argument marker (i.e. a dative case), marking goal arguments of Path verbs and other arguments of other types of verbs. *-Made* (‘until’), on the other hand, is what Beavers calls a *limit-marker*, which does not itself imply a specific Path. Correspondingly, according to Beavers, Spanish allows goal-marking via the argument marker *a* ‘to’ for Path verbs and in some cases with Manner verbs.⁶ The Spanish preposition *hasta* may also in some cases function as a goal-marker in combination with Manner verbs, just like Japanese *-made*, but *hasta*, compared to *a*, has a more general sense of delimitation. Although limit-markers are not in and of themselves goal markers, their use in motion constructions shows that they offer an available strategy for indicating a goal of motion (Beavers 2008). In brief, what we see for verb-framed languages like Spanish and Japanese is, according to Beavers, the same basic contrast between argument markers and delimiters. What is important for the present study is 1) that the status of the preposition *a* as the best indicator of goal-oriented meaning in Spanish expressions of directional motion is not questioned, and 2) that the characteristic use of a verbal argument marker (*a*) as a strategy for expressing a goal of motion, indicates that its acceptability in combination with Manner of motion verbs depends on whether the verb meaning

⁴ The relatively low productivity of the combination of certain verbs and goal-phrases (e.g. *bailar—la puerta*, see example (6)) appears to be another factor at work in determining the (very low) feasibility of having a goal-phrase with *a* in addition to one with *hacia*. Other combinations with a higher productivity (e.g. *nadar—orilla*) may allow sporadic occurrences of the goal-phrase with *a*. I am grateful to an anonymous referee for having directed my attention to this point.

⁵ See also Martínez Vázquez 2001; Slobin & Hoiting 1994; Stringer 2001; among others, for discussion.

⁶ In the Romance languages the preposition *a* serves a variety of functions as a marker of verbal arguments, such as indirect objects in transfer of possession constructions, or human direct objects in Spanish, etc., covering many of the uses of *-ni* in Japanese (qua dative case) (Beavers 2008).

is compatible with the use of an argument goal marker. In other words, is there an element of the verb meaning that successfully may be referred to as associable with a goal?

While it is evident that Path verbs like *salir* ('to go out') do have such an element, Manner of motion verbs, e.g. *bailar* ('to dance'), typically do not. However, there may be some types of Manner of motion verbs (and contexts⁷) which semantics do allow for goal-marking, e.g. verbs like *correr* ('to run') that seem to have a general element of directionality (Son 2007).⁸ From this point of view, the same strong constraints on the verb meaning cannot be expected for prepositions like *hacia* ('toward') or *hasta* ('until/to') since they are not goal argument markers.

As pointed out above, goal-marking with *a* in combination with Manner verbs is widely assumed to represent unacceptable usage in Spanish (e.g. Talmy 2000; Aske 1989, Morimoto 2008). Nevertheless, the encoding options available in canonical verb-framed languages are in fact even wider than assumed by these authors, among others. Naigles *et al.* (1998) report that Spanish licenses the use of Manner verbs in punctual events, in which the Path is shortened and the boundary-crossing itself is outside the locus of the actor's control, particularly with vertical Paths (e.g., *tirarse a la piscina* 'throw oneself into the pool').⁹ Similar observations for other verb types have been made by Martínez Vázquez (2001) and Fábregas (2007). They report that expressions of directed motion in general are, as expected, particularly compatible with Manner of motion verbs like *volar* ('fly') and *correr* ('run').¹⁰ In contrast to what is claimed in Aske (1989), not only atelic, but also telic Path phrases are attested:

- (7) Vol-arón a Mar de Plata (Spanish: Martínez Vázquez 2001: 52, (112))
fly-PST.3PL to Mar de Plata
'They flew to Mar de Plata'
- (8) Michel corr-e a-l molino (Spanish: Fábregas 2007: 168, (3))
Michel run-PRS.3SG to-the mill
'Michel is running to the mill'

According to these authors, these examples suggest that in fact the lexical meaning of the verb may be a decisive factor for the acceptability of telic uses, since some types of Manner verbs seem to be more easily attestable in telic expressions than others. However, Fábregas (2007) and Martínez Vázquez (2001) are not reporting results of quantitative studies, and they do not correlate, in a systematic manner, the acceptability of the telic expressions with the use of specific verbs or verb types. What they do demonstrate is the sporadic use of Manner of motion verbs in expressions of telic motion events. According to Martínez Vázquez, the possibility of using Manner of motion verbs in telic expressions is not a productive rule in Spanish; it is rather an exception (Martínez Vázquez 2001: 44). The present study examines the role of Manner verbs in expressions of telic motion by using quantitative methodology.

Beavers *et al.* (2010) discuss a similar telic use of the French preposition *dans* ‘in’, which in general allows only a locational interpretation. Occasionally it can be found in contexts where it is compatible with a goal interpretation, as exemplified in (9)-(10) (examples provided by Beavers *et al.* 2010):

- (9) Il court dans le jardin (French: Pourcel & Kopecka 2006: 35)
He runs in the garden
'He runs into the garden'

⁷The role of the specific context is emphasized in Beaver (2010) and Levin (2009).

⁸ Notice in that respect that the argument marker *a* is not the direct Spanish counterpart of the English goal-marker *to*. See Fábregas (2007) and Son (2007). See also the discussion in Levin (2009).

⁹ See also Feist *et al.* (2007).

¹⁰ In both studies, the data stem from the CREA corpus.

- (10) Allez, cour-ons dans la maison! (French: Stringer 2003 : 46)
 Go-2PL, run-1PL in the house
 ‘Come on, let’s run into the house!’
 (In a context of a mother shouting to her children to come inside.)

As we have seen in this section, and as pointed out by Beavers *et al* (2010), a number of previous studies of Spanish and comparable verb-framed languages seem to suggest that the verbal lexeme systematically may play a central organizing role in the encoding of the motion event, and that specifically different types of Manner of motion verbs represent a distinct acceptability in combination with telic Path predicates. (see e.g., Alonge 1997; Baicchi 2005; Fábregas 2007; Folli & Ramchand 2005; Kopecka 2006; Martínez Vázquez 2001; Naigles *et al.* 1998; Pedersen 2013; Allan *et al.* 2007; Kopecka 2006). The verb does not seem to have the same organizing role in Germanic languages, e.g., English, which is suggested by the fact that these languages allow for what is often referred to as a secondary predication irrespective of the verb type (e.g., Aske 1989; Morimoto 2008; Snyder 2001) (for a brief theoretical discussion, see the next section).

Manner of motion verbs can tentatively be subdivided into those whose core meaning of motion somehow implicates directionality, for instance *running* and *flying*, and those that do not, such as *dancing* or *floating*. The lexical meaning of the former type is likely to some extent to have connotations of Path, and they are typically used in a goal-oriented context. Therefore, we may hypothesize that verbs of this type are relatively more acceptable in combinations with telic Path predicates.¹¹

To sum up, Manner verb constructions of telic motion, such as *he ran out on the street*, or *the fly buzzed into the room* (Goldberg 1995; Talmy 2000), are common and even the typical combination in English. To examine more closely to what extent the apparently unusual telic usage of Manner verbs is related to a specific verb meaning in Spanish, we need a quantitatively focused study of the use of Manner verbs in expressions of telic motion events of the type: [SUBJ V GOALMARKER NP] / ‘telic motion’. In Section 4, I will report on the results from a quantitative study of this case of variation. To explain this usage, I will – in the following section, and subsections – introduce the term *variable type framing* and the theoretical framework of which it is an integrated part.

3. The theoretical framework

The analysis presented here is usage-based and conducted within the basic conceptual framework of a family of Construction Grammars (e.g. Boas 2003, Boas 2010a; Croft 2001, 2003; Goldberg & Jackendoff 2004; Goldberg 1995, 2006; Langacker 1987/1991) with particular reference to the frameworks developed by Goldberg (1995, 2006) and Langacker (1987/1991). In usage-based approaches to grammar, grammatical structure emerges from language use in the sense that linguistic units are seen as being abstracted from usage events. The fundamental implication of the usage-based model is that the existence of constructions (pairings of form and meaning) in grammatical representation is a function of frequency and similarity in form and meaning. When a construction has a high frequency in usage, it is considered to have a high degree of entrenchment (Langacker 1987), i.e. cognitive automation, in grammar. A high degree of entrenchment means that the linguistic structure in question has a stable status in grammar. User’s generalizations from structural similarities in usage are captured by the notion *schema*, which is defined as a cognitive representation of such generalizations (Goldberg 2006).

Constructions are non-derived form-meaning pairings of different specificity, stored as the basic elements of users’ grammar (Goldberg 1995, 2006). Even derived form-meaning pairings are stored independently as grammatical constructions, if they are sufficiently frequent (Goldberg & Jackendoff 2004; Goldberg 2006). Importantly, from a constructionist perspective, most expressions have

¹¹ The same has been suggested by Son (2007).

an internal constructional structure, and they very often consist of many different construction types that have different degrees of specificity. These construction types are typically lexical constructions, idioms, NP- and VP-constructions, morphological constructions and argument structure constructions, but also many other types.

Goldberg's seminal work on argument structure constructions (Goldberg 1995, 2006), which assumes both a basic separation and a close integration of the schematic construction and the lexical construction, has had a major influence on the framework of the present study. In some frameworks, the principle of the syntax-lexicon continuum in constructionist approaches to grammar is followed more strictly, assuming no division between the lexical and the constructional representation of argument structure (see e.g. Boas 2010a, 2011; Croft 2001, 2003). Boas (2010a), for instance, argues that such a division is based on an artificial and unnecessary distinction and that there should be no mechanism of fusion between the two levels, as it is sometimes difficult to constrain this fusion. According to Boas, a unified frame semantic representation including different levels of generalization offers several analytic advantages, among them that there is no need for fusing lexical entries with abstract constructional meaning, thereby avoiding some of the problems that have arisen in the Goldbergian constructionist framework.

In the theoretical framework of this study, I adopt the frame-semantic focus on lexical information for the study of Spanish argument structure. But I also argue that for the comparison of (argument structure) constructions across languages (cf. Boas 2010b) and for typological theorizing, a division between the two representational levels of argument structure seems to offer an analytic advantage. I will hypothesize that core grammar – the clausal argument structure – is organized by means of basically two construction types, which on the one hand are different regarding their specificity and schematicity, and on the other hand are highly integrated. Both are potential devices for the organization of argument structure:

1) **Schematic argument structure constructions** that organize complex information at an abstract level. They are formed on the basis of generalizations from usage (Goldberg 2006). At a general level, schematic argument structure constructions are *diagrams* with the basic structure: [a b c] / 'x y z', indicating that they are lexeme independent form/meaning pairs.

2) **Lexical argument structure constructions** that organize substantial and complex information in a valence structure profiled by the verb (Langacker 1987: chap.8). Lexical argument structure constructions have the basic form: [a-V(b)-c] / 'x-V(y)-z', indicating that the verb (V) is the lexical profile of the construction. In cognitive grammar, a valence relation is a combinatory relationship between component structures in a grammatical construction, affected by correspondences between their subparts (Langacker 1991: 555). A composite structure inherits the profile of one of its components. The component structure whose profile is inherited is the profile determinant of the construction. Lexical constructions of argument structure, such as the Spanish construction of telic motion, are lexeme dependent form/meaning pairs and the verb lexeme is considered the profile determinant of the construction.

All languages seem to make use of both organizational devices, though in different manners. From a Goldbergian usage-based point of view, it seems reasonable to assume that the formation of schematic constructions in grammar, cf. 1), on the basis of generalizations from usage, is universal (Goldberg 2006). Nevertheless, this study suggests that neither schematic argument structure constructions (construction type 1) nor lexical argument structure constructions (construction type 2) are universally the principal organizational devices in the encoding of argument structure.¹²

¹² González-García (2009) shows, convincingly, on the basis of coercion-phenomena, that not only English, but also Spanish has grammatical configurations that should be characterized as constructions in their own right (lower-level configurations of the more general *subjective-transitive construction*). However, such schematic constructions are not necessarily the main device for the organization of argument structure. As Goldberg (2006: 120) points out, in some

On the basis of this general theoretical framework, and based on previous research (Pedersen 2009a, 2009b, 2013), I hypothesize that: A) languages may differ according to the level of constructional specificity (level 1 or 2) at which the framing event – e.g. directed motion – is principally organized, B) typological features such as the ones observed by Talmy (1991, 2000) and Aske (1989) are anchored in this difference and C) the principal organizing device in Spanish is a lexical argument structure construction based on conceptual valence structure (Langacker 1987).

3.1 Beyond the Talmian approach – Generalizations about constructional organization

Talmian typological thinking assumes universality and invariability in various aspects:

1) Universality and invariability of the applicable semantic domains. The applicable semantic domains are macro-events of different types. Talmy identifies five types of macro-events: *motion event*, *state change*, *temporal contour*, *action correlation* and *event of realization/completion* (Talmy 1991, 2000). But it is not completely clear what the constraints are in terms of what counts as a macro-event in Talmy's framework and why exactly these five semantic domains and not others (to some extent) should be applicable to his typology. In contrast, the present approach is anchored in usage-based principles for its ontology and applicability (Pedersen 2009a).

2) Universality and invariability of the framing event in each domain. This issue concerns the premise that underlies the term *framing event*, which is the central term of the typology. For instance, 'Path of motion' and 'state change' are assumed to have universal status as framing events in the typology. But is it plausible to assume that there is an invariable and delimited set of framing events upon which complex events are constructed in different languages, when within one language the same perceived event can be framed in various different ways (Bohnenmeyer *et al.* 2007)? In contrast to the Talmian account, the present approach assumes intra-linguistic variation regarding the type framing.

3) Universality and invariability of the level of constructional specificity at which (framing) events are encoded (lexical/morphological level). Talmy's typology is basically about lexicalization patterns. The relationship, though, between linguistic form and cognitive event representation is complex and mutable. Information about an event is usually not mapped onto a single lexical item. It is typically distributed across, e.g., phrases and clauses (e.g. Bohnemeyer *et al.* 2007).¹³ In contrast to the Talmian account, the present approach assumes cross-linguistic variation regarding the level of constructional specificity at which the framing is organized (Pedersen 2009a, 2009b, 2013).

There is general consensus in linguistic theorizing that fundamental clausal form and syntax (e.g., the formal sequences 'SUBJ, V, OBJ, OBL', or 'SUBJ, V, OBL'), reflects a corresponding conceptual representation of basic event structure (e.g., Goldberg 1995; Jackendoff 1990; Newmeyer 2003; Pinker & Bloom 1990). In other words, basic patterns of grammatical form has an argument structure, which represents the skeletal meaning of the clause (e.g., 'X caused Y to move Z' or 'X move Y'). In terms of grammatical representation, we will refer to this skeletal form and meaning as *the main information* (MI) about argument structure.¹⁴ *Supplementary information* (SI), still in terms of

languages (e.g. Romance languages) the verb is much more restrictive than it is in English, in the sense that it only appears in constructions that match its meaning.

¹³ See the discussion in Bohnemeyer *et al.*'s *Language* paper, in which it is proposed that what they call *the macro-event property* (MEP), a property of constructions that assesses the 'tightness of packaging' of subevents in the construction, should be the starting point (Bohnenmeyer *et al.* 2007: 497).

¹⁴ Let me stress that this term refers to grammatical representation and organization; it is about grammatical knowledge and procedure and does not refer to what, from the perspective of the user, is more or less important information in the clause.

grammatical representation, complements the skeletal form and meaning, and can typically be qualified as secondary or supportive argument structure information (e.g., a specification of Manner: *he kicked the ball into the room*; *salió de prisa* ‘he went out **fast**’ (Spanish). In this perspective, a fundamental typological question is: how are MI and SI organized in the grammar of language X?

Adopting the basic principles of usage-based grammars,¹⁵ we may now hypothesize that not only grammatical constructions in language X, but also general organizational constraints (rules) associated to the representation of MI and SI are learned (distilled out of usage) and stored as abstract constructions in the grammar of that language (Pedersen 2009a). MI-form and SI-form in grammar are mapped onto fundamental types of organizational devices:

A) Diagrammatic organization (DORG)

B) Lexical organization (LORG)

Basically two types of generic main information constructions (MIC) and supplementary information constructions (SIC) may be generated via generalization:

MIC: [MI] / ‘DORG’ versus [MI] / ‘LORG’

SIC: [SI] / ‘DORG’ versus [SI] / ‘LORG’.

Generic MIC and SIC are information structure constructions in the sense that they represent generalizations about how grammatical information is organized in the clause. Knowledge of MIC/SIC in the grammar of language X helps the user to encode argument structure properly according to the prevailing constraints in that language. MIC and SIC have, thus, a procedural function, as devices for grammatical organization.

3.2 Hypothesis on cross-linguistic variation – DORG versus LORG

The pivotal point of the hypothesized usage-based typological determination is the character (lexical versus diagrammatic) of the construction type that encodes the basic skeleton of meaning. The hypothesized typological difference between English and Spanish is represented schematically in Table 5:

| | MI | SI |
|----|-------------|------|
| EN | DORG | LORG |
| SP | LORG | DORG |

Table 5 The organization of argument structure in English (EN) and Spanish (SP).

The two languages are correspondingly characterized by the following combinations of generic construction types (MIC/SIC):

¹⁵ Most importantly that grammar is represented and stored as constructions of different specificity, due to constant generalizations from usage (e.g., Goldberg 2006; Langacker 1987, 1988). A more detailed account of the implications of the usage based approach is offered in Section 4.

English: [MI] / ‘DORG’ + [SI] / ‘LORG’

Spanish: [MI] / ‘LORG’ + [SI] / ‘DORG’

Pedersen (2009a, 2009b, 2013) has shown substantial evidence from a broad diversity of semantic domains that suggests cross-linguistic differences regarding the organization of argument structure. The main issue is that independent linguistic diagrams seem to play a central role in the organization of grammar in Germanic languages, whereas the lexical construction, operating on principles of valence structure,¹⁶ is the major organizing device in Romance languages.¹⁷ The English *way*-construction exemplifies this difference (see Pedersen 2013):

- (11) Peter fought his way out of the restaurant
[SUBJ_i V POSS_i *way* OBL] / ‘X moves Y with difficulty by creating a Path’

The skeletal meaning of this expression type may be paraphrased as ‘X moves Y with difficulty by creating a Path’ (e.g., Goldberg 1995, 1996). None of the lexical elements, by providing an organizing valence structure, may *per se* have a central role as the profile determinant in the encoding of this basic meaning. Instead, a diagram, the *way*-construction: [SUBJ_i V POSS_i *way* OBL], provides the characteristic meaning of this expression type. The verb *fought* specifies how this motion event has been carried out. Spanish versions of the *way*-construction are organized in a fundamentally different manner:

- (12) Pedro se **abr-ió** camino (a codazos) para salir ... Spanish
Pedro REFL.DAT open-PRS.3SG way by elbows to get out
‘Pedro elbowed his way out ...’

In Spanish, the characteristic meaning of the *way*-construction is organized in a lexical valence structure, on the basis of principles of profile determinacy. Clausal arguments fill in slots in a valence structure headed by the verb. *Abrir* = ‘open’ combines typically with subject and object, permitting, as in (12), an additional marker of indirect object. Specifying information about the means of this act of motion is provided in an independent adverbial construction, which is not lexically derived (*a codazos*).

3.3 Hypothesis on intra-linguistic variation - Variable type framing

According to the hypothesis of intra-linguistic variability in framing (see point 2 in Section 4), complexity of the basic framing of argument structure (MI) may vary, irrespective of its nature. The basic framing (diagram or lexeme) may be complex and complete to a varying degree. This kind of intra-linguistic variation will be referred to as *variable type framing*. The specific type framing option reflects the complexity, the completeness and the typicality of the basic framing. As a minimum condition, the basic framing of argument structure (MI) in combination with a supplementary framing (SI) have to provide the encoding of the intended skeletal meaning, for instance, goal-oriented motion (‘X move Y’):

¹⁶ which are similar to principles of subcategorization in lexical approaches (see e.g. Grimshaw, 1990; Levin and Rappaport Hovav, 1995; Pinker, 1989).

¹⁷ Regarding other Romance languages, see specifically Pedersen (2009a, 2013).

Minimum framing condition: MI + SI = encoding of intended skeletal meaning

Framing conditions that do not fulfill the minimum framing condition will be referred to as *defective framing*. As we shall see in Section 3.3.1, the implication of this minimum condition is that in English, when the diagrammatic encoding (MI) of the intended skeletal meaning is only partial, it has to be completed by the lexical construction (SI). Correspondingly, in Spanish (Section 3.3.2), when the lexical encoding (MI) of the intended skeletal meaning is only partial, it has to be completed by a supplementary diagram (SI). The optimal condition is that the intended skeletal meaning is completely encoded by means of basic framing (diagrammatic or lexical MI, depending on the language type), and that supplementary information is provided via SI-organization as a specification of the intended meaning:

Optimal framing condition: MI = encoding of intended skeletal meaning
SI = specification of the intended meaning

Framing conditions that fulfill the optimal framing condition will be referred to as *complete type framing*. It is reasonable to assume that prototypical framing conditions are optimized rather than minimized, or defective.

3.3.1 Variable type framing in English

Directional motion may be framed differently in a DORG language. Example (13) represents a typical framing pattern for Germanic languages:

- | | |
|-----------------------------------|-----------------------|
| (13) He <i>ran</i> into the house | Complete type framing |
| [SUBJ V OBL] / 'X moved Y' | Diagram |

The complete diagrammatic encoding of the intended directional motion integrating a verbal specification of the Manner of motion ('to run') represents an optimal framing condition. An alternative framing option would be:

- | | |
|---|----------------------|
| (14) He <i>entered</i> the house | Partial type framing |
| [SUBJ V OBJ] / 'X got into contact with a goal Y' | Diagram |
| [SUBJ enter] / 'X moved in' | Lexical framing |

In (14), the encoding of a weak transitive relation between subject and object – X gets into contact with a goal Y – has been chosen to be the basic organizing diagram. According to the minimum framing condition, the verb has to fulfill, lexically, the incomplete diagrammatic encoding of the intended meaning, which is 'directional motion'. The verb is not a lexical specification of Manner of motion – as it is in (13) – the verb is a necessary completion of the intended directional meaning.

The hypotheses upon which this analysis is based (cf. Sections 3.1-3.3) make the correct prediction that (15) is not a possible encoding option for this particular reading of directional meaning ('he moved into the house'):

- | | |
|---|------------------------|
| (15) *He <i>ran</i> the house | Defective type framing |
| [SUBJ V OBJ] / 'X got into contact with a goal Y' | |

The verb is a Manner of motion verb, and it does not provide the missing element of the intended directional meaning, thus, the minimum framing condition is not fulfilled. Nevertheless, due to the basic diagram, (15) implies another, clearly transitive, reading: 'he governed the house' (cf. *he ran*

the business). According to this latter reading, X is actually doing something to Y (the house), as the primary intended (transitive) meaning. Consequently, this reading is an instance of complete type framing.

An important issue we have to address briefly is the following: if example (14) is perfectly acceptable in English, why is (13) clearly the one that characterizes this language type the most? According to our model of analysis, the answer seems to be that (13) and (14) simply are instances of complete and partial framing respectively. Following our hypothesis that English is a DORG-language, which organizes the intended skeletal meaning in a framing diagram, the complete framing option is the optimized encoding strategy – it fulfills the optimal framing condition. Other things being equal, it is the option that best exploits the encoding potential of the diagrammatic strategy. This is what characterizes (13), and it is, conversely, what is impeded when the diagrammatic framing is only partial, as in (14). The framing of argument structure follows in the latter case the basic principle of a DORG-language, though the encoding options are not optimized.

To conclude this section, when it comes to the framing of directional motion in English, the use of Manner of motion verbs is typologically highly motivated, yet not predicted. A considerable language internal variation can be observed and explained as a matter of variable type framing.

3.3.2 Variable type framing in Spanish

The principle of variable type framing – that the complexity and the completeness of the basic framing may vary – also suggests the existence of various framing options for lexical verb framing in Spanish. The characteristic expression of goal-oriented directional motion in (16) exemplifies the prototypical Spanish framing option, according to which the conceptual valence structure of the verb (telic path verb) provides the intended skeletal meaning ‘X moves to Y’:

| | | | | |
|------|--|-------------------|--------------|-----------------------|
| (16) | Pedro sal-ió | a la calle | (corr-iendo) | Complete type framing |
| | Pedro go-PST.3SG | out to the street | (run-GERUND) | |
| | [SUBJ salir ADV] / ‘X go out Y’ | | | Lexical framing |
| | [ADV] / ‘manner-specification’ | | | Specifying diagram |
| | ‘Pedro ran out on the street’ | | | |

The goal-marking PP-phrase *a la calle* is directly associated with the telic path meaning of the verb, by means of a conceptual valence structure. By means of a verb independent diagrammatic (adverbial) construction, typically a gerund-construction, the Manner of motion may be specified. This optional specification ensures that the optimal framing condition is fulfilled (see Section 3.3).

As an alternative verb framing option, (17) also seems to be possible:

| | | | | | |
|------|---|-------------|--------|----------|----------------------|
| (17) | Fernando | corr-ió | a-l | baño | Partial type framing |
| | Fernando | run-PST.3SG | to-the | bathroom | |
| | [SUBJ correr ADV] / ‘X run in direction Y’ | | | | Lexical framing |
| | [SUBJ V OBL] / ‘X moves to Y’ | | | | Complement diagram |
| | ‘Fernando ran to the bathroom’ | | | | |

In this case, the verb framing is only marginally associated to the core meaning of *correr*, which is Manner of motion. The verbal lexeme provides, though, an implicit element of associated directional meaning, in the sense that when we run we usually run in some direction. Thus, the contribution of the verb framing to the intended skeletal meaning (‘to move somewhere’), by means of a conceptual valence structure, is incomplete and insufficient. It has to be complemented by a diagram of telic motion, [SUBJ V OBL] / ‘X moves to Y’, to fulfill the minimum condition. The prediction is that if the verb meaning impedes full as well as partial framing, the construction of telic motion is impossible with that verb. In (18), in fact, the Spanish type framing is defective – the minimal fram-

ing condition is not fulfilled – since the verb lexeme cannot license the framing of the intended meaning of goal-oriented directional motion:

- (18) *María Bail-ó al/fuera de... Defective type framing
 María dance-PST.3SG to/out of
 ‘María danced to/out of...’

Due to its meaning structure – manner of motion with no element of directionality – the verb cannot establish the intended skeletal meaning (telic motion) in a conceptual valence structure, not even partially by means of an associated meaning of directionality, cf. (17).

Prototypicality of lexical framing is not only a matter of completeness versus partialness of the basic framing in relation to the intended meaning. It also depends on the centrality of the intended skeletal meaning in the conceptual structure of the verbal lexeme. In characteristic Spanish expressions of goal-oriented motion, as in (16), the verb has the core meaning: ‘Path of telic motion’, which facilitates a *central type framing*. In (17), the verb framing of directional motion is marginally associated with the core meaning of *correr*, which is Manner of motion. I will characterize this type of lexical framing as *marginal type framing*, with reference to the framing element, located at the semantic periphery of the framing lexeme. As a consequence, we may expect this expression type to be relatively unstable and less entrenched in the grammar than expressions based on central type framing. This is reflected by the fact that it seems to be relatively less frequent than the prototype in (16).

As a parallel to English, complete (and central) type framing in Spanish implies that the optimal framing condition is fulfilled, according to which a manner specification of the intended skeletal meaning (telic motion) is provided by a secondary, supplementary framing, e.g.: *salió a la calle corriendo* ‘he moved out on the street **running**’. This is opposed to expression types organized on the basis of partial (and marginal) type framing (*corrió a la playa* ‘he **ran** to the beach’) in which a separate manner specification of the intended meaning is not available: the intended meaning pattern as well as the manner specification is provided by the verb in a merged form. In addition, while the basic framing (of telic motion) is marginal, its manner specification is central in the meaning structure of the organizing verbal lexeme. Even though it is certainly a possible framing option in Spanish, in the proposed typological framework it is an unexpected combination of lexically marginal basic framing and central supplementary framing.

4. The present study

The present study is a quantitative corpus study of the role of the verbal lexeme in Spanish Manner verb expressions of telic motion of the type: [SUBJ V GOALMARKER NP] / ‘telic motion’ as discussed in Sections 2 and 3. The data will be compared to parallel English expression types.

4.1 Data and methodology

The analysis is based on searches in Corpus del Español (CE), which is a large monolingual corpus available on the Internet. Corpus del Español is an annotated corpus, tagged for lemma and parts of speech.¹⁸ It is therefore a suitable data source for our purpose, which is to conduct a systematic and quantitative corpus study. The corpus consists of around 100 million words in nearly 14,000 Spanish texts from the 12th to the 20th centuries. The present study is concerned only with modern Span-

¹⁸ The annotation of CE is an important difference to be noted with respect to CREA, which was used in Fábregas (2007), Martínez Vázquez (2001) and Pedersen (2013). Corpus del Español can be accessed on the website: <http://www.corpusdelespanol.org/>

ish usage. Searches therefore were carried out exclusively in texts from the 20th century. Regarding the composition of the corpus, it contains oral as well as written language (interviews and transcripts, newspaper and magazine texts, fiction and academic texts).¹⁹

As a goal argument marker, the preposition *a* is the best non-verbal indicator of telicity (see the discussion in Section 2). I therefore searched for expressions of goal-oriented motion by means of a simple search-string that identifies a Manner of motion verb in goal-oriented usage: [verb + *a/al* + NP]. Telic usage frequencies for a specific verb were measured as occurrences of goal-oriented expressions in relation to the total number of verb-tokens (ratio of telicity).

I decided to examine the behavior of almost the same list of Spanish Manner of motion verbs that were chosen by Martínez Vázquez (2001).²⁰ Her point of departure for the verb selection was the hypothesis derived from the exhaustive research on the topic published from Talmy's work onwards that the 'Manner' + 'Motion' conflation process is an English pattern, foreign to Spanish.²¹ Levin (1993: 105-106) distinguishes five classes of English verbs that do not *per se* express displacement but that may express directed displacement when they are followed by a Path phrase: verbs of sound emission, run verbs, waltz verbs, verbs of body-internal motion and push/pull verbs. In Martínez Vázquez (2001), representative Spanish verbs of each class were selected for her study. Notice that many of the verbs listed by Levin do not have a Spanish verbal counterpart. Manner verbs that do not imply motion, in combination with a telic PP-phrase, could not be attested at all for Spanish in Martínez Vázquez (2001). Two extremely rare Manner of motion verbs mentioned in Martínez Vázquez's study could not be attested in Corpus del Español, *valsar* 'to waltz' and *polcar* 'to dance the polka', and they were therefore excluded from the verb inventory of the present study. Two verbs that were not included in Martínez Vázquez (2001) have been added in the present study (*marchar* 'to march' and *navegar* 'to sail') as they contribute with interesting angles to the discussion. The inclusion of these two verbs has practically no effect on the overall distributional analysis since no occurrences of telic usage have been found for *marchar*, and very few for *navegar*. The verb inventory is the following:

Andar 'to walk', *arrastrar(se)* 'to crawl', *bailar* 'to dance', *caminar* 'to walk', *cojear* 'to limp', *conducir* 'to drive', *correr* 'to run', *corretear* 'to run around', *danzar* 'to dance', *deslizar(se)* 'to slip', *esquiar* 'to ski', *flotar* 'to float', *gatear* 'to crawl', *marchar* 'to march', *nadar* 'to swim', *navegar* 'to sail', *patinar* 'to skate', *pedalear* 'to pedal', *remar* 'to row', *renquear* 'to limp', *rodar* 'to roll', *saltar* 'to jump', *tambalear* 'to stagger', *traquetear* 'to move with a rattle', *trotar* 'to trot' and *volar* 'to fly'.

This inventory of verbs includes those that typically have been discussed in the literature, such as *correr* ('to run'), *volar* ('to fly'), *caminar* ('to walk'), *flotar* ('to float') and *bailar* ('to dance'), and some less frequently discussed verbs with a similar Manner of motion profile.

The lexical meaning of each verb was determined by using the principal dictionary definition in the monolingual dictionary DUE (*Diccionario de uso del Español*). Some of the verbs are activity verbs that, apart from the definition of 'Manner or means of motion', refer to a directional motion event: moving in space from one place to another (A-type). Other verbs in our list of inquiry are activity verbs whose meaning exclusively focuses on manner or means of motion (B-type).²²

We can identify an implicit element of directional meaning in the verbal lexeme by using a simple diagnostic test: The verb meaning has an associated element of directionality if the question: 'where did he/she/it... move to?' is meaningful in the immediate context when added to the primary

¹⁹ Literature: 25%, Academic texts: 25%, news and magazines: 25%, oral. We have to take into account that the first three text categories also may include different kinds of oral usage.

²⁰ A more complete list of manner of motion verbs can be found in Cifuentes Férez (2009, 2010).

²¹ This pattern of conflation is mainly attested with certain classes of manner of motion verbs, though English extends this pattern to verbs that do not imply any type of movement (Martínez Vázquez 2001).

²² See also Fábregas (2007) for a similar division of Spanish manner of motion verbs in two types (based on the features *process* and *Path*).

dictionary meaning of the verb. The verb *caminar*, for instance, has literally the Manner of motion meaning ‘to walk’. But from its primary dictionary meaning (‘he moved from one place to another in any manner’), we may infer an additional element of directional motion by adding the diagnostic question (‘where did he move to?’). The same procedure identifies directionality in, for instance, *andar* (‘he moved from one place to another by walking’), *correr* (‘he moved fast from one place to another...’), *volar* (‘he moved in the air, to travel, to be transported ...’), and *navegar* (‘some vehicle moved on the water/he moved on the water in a vehicle’).

Even the lexical meaning of *saltar* (‘jump’) implicates a strong directional association, even though the diagnostic test in this case may seem confusing: ‘he moved up with a sudden impulse, ..., vertically or obliquely, to fall again in the same place, or in another place at the same level, or at a higher or lower level → ‘where did he move to?’ → ‘he moved up’. The meaning profile of *saltar* is spatial and has a strong element of ‘moving in some direction’ (usually up). Thus, in terms of associative directionality, it is natural to categorize *saltar* together with, e.g., *correr* or *volar*. This indicates that there is no need to treat the telic usage of verbs like *saltar* as an exception to a general rule of non-telicity (Aske 1989), as suggested by Naigles *et al.* (1998). Instead, such verbs should be analyzed together with verbs like *correr* or *volar*.

For another group of Manner of motion verbs, we cannot directly associate an element of directionality with the lexical meaning of the verb by using the same procedure.²³ Consider, for instance, the following verbs: *danzar*, *bailar* ‘he moved rhythmically the body and the limbs... → (??) ‘where did he move to?’; *flotar* ‘it stayed on the surface of a liquid without sinking – it sustained within a fluid without sinking’ → (??) ‘where did it move to?’; *tambalear* ‘he moved repeatedly to one side and to the other while maintaining a fixed point, as if he were going to fall’ → (??) ‘where did he move to?’; *conducir*: ‘he operated a vehicle to make it move from one place to another’ → (??) ‘where did he move to?’ The meaning profile of *conducir* is ‘handling something’: ‘he operated a vehicle ... He moves (nowhere) in order to operate a vehicle. The vehicle moves (with him) somewhere. Intuitively, the lexical meaning of *nadar* (‘to swim’) may suggest a directional element, though, according to DUE, the primary focus is on the activity of swimming: ‘he sustained floating in a liquid – he was immersed in water, without touching the bottom’ → (??) ‘where did he move to?’ / ‘he moved on the water surface’ → ‘where did he move to?’.

Some might object that the analysis should not depend on lexical descriptions in a dictionary since such definitions might reflect exactly the telic usage that is under scrutiny. If that were the case, the task of determining a link between the lexical verb meaning and its telic usage in a corpus would have a certain element of circularity. However, since the combination of Manner of motion verb with a telic Path-phrase seems to be relatively infrequent, there is no reason to assume that the main dictionary definition of the verb meaning should reflect specifically this usage.

As control data that represent typical satellite-framed encoding options for English, I examined the telic usage of three English Manner of motion verbs with a clear Manner profile: *float*, *dance* and *crawl*. The control data must guarantee that our findings for Spanish do not simply reflect a general pattern that also applies for English. Since it is unclear to what extent the *a*-marker is the Spanish counterpart of the English goal-marker *to* (e.g., Fabregás 2007; Son 2007), I decided to examine the frequency of only three English verbs, but in combination with a broad range of English goal-markers (*to/out/in/into/over/under/up/down/around*), in the British National Corpus (BNC), which is a corpus of 100 million words. This necessary, and reasonable I believe, simplification impeded that the relation between the three Manner of motion verbs and the telic construction were measured in terms of attraction to this construction by means of Fisher’s exact test (see below).

I analyzed the Spanish data as collostructional phenomena and applied an adapted and simplified version of the standard model of analysis (Stefanowitsch & Gries 2003). In collostructional analysis, the principles of measuring lexical collocation are applied to the interaction of lexemes and the

²³ Notice that I am certainly not claiming that the meaning of the verbs in this group do not entail displacement. I am suggesting that these verbs do not lexicalize directionality.

grammatical constructions associated with them in the internal structure of constructions (see Section 3). This method is thus specifically framed in a construction-based theory of language, providing a device that determines the degree to which a particular slot in a grammatical construction prefers, or is restricted to, a particular category of lexical constructions. In the collostructional approach, we are not simply committed to the determination of verbal frequencies in a specific construction. The analysis has to account for the frequency of the verb in relation to its frequency in other constructions. Conversely, the collostructional analysis not only takes into account the relative frequency of the verb in a specific construction, it is also sensitive to the absolute frequency of the verb in the construction. The absolute frequency is an indicator of entrenchment in the grammar of the construction in combination with a specific verb (Stefanowitsch & Gries 2003). Grammatical entrenchment concerns the degree of conventionalization of a linguistic unit in usage-based theories of grammar (Langacker 1987). In other words, the collostructional analysis characterizes the verbal lexeme in terms of its relative attraction to, and entrenchment in, a specific construction. More specifically, the present study aims to measure which Manner of motion verbs are most attracted to, and entrenched in, the construction: [V *a* NP] / ‘Manner of intransitive telic motion’.

Following the principles outlined by Stefanowitsch and Gries (2003), the analysis takes into account four frequencies: A) the frequency of the lexeme in the empty slot of the construction; B) the frequency of the construction with other lexemes filling the slot; C) the frequency of the lexeme in all other constructions and D) the frequency of all other lexemes in all other constructions. The four frequencies are inserted into a cross table and run through a Fisher exact test:

| | Verb | Other verbs | Row totals |
|----------------------------|--|--|-------------------|
| Telic construction | <i>A: Verb in the telic construction</i> | B: Other verbs in the telic construction | $A + B$ |
| Other constructions | C: Verb in other constructions | D: Other verbs in other constructions | $C + D$ |
| Column totals | $A + C$ | $B + D$ | $A + B + C + D$ |

Table 1 Cross table for the collostructional analysis

The input for the table is derived directly (the cells in italics) or indirectly (via subtraction) from the corpus data. A = occurrences of the verb in goal-oriented expressions; $A + C$ = total number of occurrences of the verb in the corpus; $A + B$ = total number of goal-oriented expressions; $A + B + C + D$ = the total number of constructions in the corpus.²⁴

The Fisher exact test computes the exact probability under the null hypothesis of independence of obtaining the observed distribution of frequencies, or one that is more extreme. As Stefanowitsch and Gries (2003) point out, the insight that this kind of statistical analysis provides is not so much due to the testing of level of attraction to the construction for each verb (e.g., $p < 0.01$ or $0.001 \Rightarrow$ attraction). Its most interesting contribution is the relative ordering of the verbs according to their attraction to the construction. We also have to take into account that the inventory of verbs chosen for this study might not include all Manner of motion verbs that occur in the ‘intransitive telic motion’-construction in Corpus del Español. The calculated p -value may therefore be too low, i.e. the measured attraction may be marginally too high. Thus, we cannot interpret the p -value as a precise indicator of absolute association and attraction.

4.2 Results

²⁴ The total number of constructions may be counted as the total number of verb tags in the corpus since we are dealing with argument structure constructions centred around the verb (Stefanowitsch & Gries 2003).

First, the inventory of Manner of motion verbs, on the basis of the diagnostic procedure described in Section 4.1, is divided into two groups according to their degree of lexical association with directional meaning:

A) These verbs denote an activity of motion that has a spatial profile and an associated element of directionality.

B) These verbs denote an activity of motion that profiles Manner or means of motion, and has no associated element of directionality.

The first group (A) is listed in Table 1:

| | |
|-----------------------------|--|
| Correr 'to run' | <i>Ir rápidamente de un sitio a otro</i> con pasos largos que son saltos, pues se levanta el pie del suelo antes de haber apoyado el otro. 'To move fast from one place to another with long steps that are jumps: one foot is lifted from the ground before the other one rests'. Corrimos al zaguán y allí estaba el abuelo (CE) 'we ran to the entrance and there was her grandfather' |
| Saltar 'to jump' | <i>Levantarse</i> una cosa con un impulso súbito, del suelo o del sitio en que está, <i>vertical</i> u <i>oblicuamente</i> , para caer en el mismo sitio o en otro que esté al mismo nivel o más alto o más bajo. 'moving up a thing (person) with a sudden impulse, from the ground or from the place where it is, <i>vertically</i> or <i>obliquely</i> , to fall again in the same place, or in another place at the same level, or at a higher or lower level'. ... hube de dominarme para no saltar a la arena ... (CE) 'I had to control myself not to jump into the sand' |
| Volar 'to fly' | <i>Moverse</i> por el aire. 'Moving in the air' ... vuelan a la ciudad de los rascacielos maquetas. (CE) 'they flew to the city of the model skyscrapers' |
| Caminar 'to walk' | <i>Ir</i> alguien <i>de un sitio a otro</i> en cualquier forma 'To go from one place to another in any manner' Cristina había caminado a la casucha (CE) 'Cristina had gone to the humble hovel' |
| Andar 'to walk' | <i>Moverse de un lado a otro</i> dando pasos 'To move from one place to another by walking' ... y anda a la ventana (CE) '... and go to the window' |
| Rodar 'to roll' | Dar vueltas una cosa sobre una superficie <i>trasladándose</i> al darlas 'to roll on a surface and thereby move from one place to another' ... y el cuerpo de la Margot rodó a la calle (CE) 'and Margot's body rolled out onto the street' |
| Navegar 'to sail' | <i>Ir</i> un vehículo, o <i>ir</i> en un vehículo, por el agua. 'To move on the water (some vehicle), or to move on the water in a vehicle'. y desde allí navegaban a España. (CE) 'and from there they sailed to Spain' |

Table 1 Activity verbs with a spatial profile and directional association. Source: DUE.

The second verb group (B), activity verbs with a Manner/means of motion profile and no associated element of directionality, is listed in Table 2:

| | |
|---|---|
| Conducir 'to drive' | <i>Manejar un vehículo</i> para hacerlo ir de un sitio a otro. 'To operate a vehicle to make it move from one place to another' Demostramos nuestra confianza haciendo que ellos mismos conduzcan a su pueblo 'We demonstrate our trust by letting them drive themselves to their village' |
| Marchar 'to march' | <i>Andar los soldados en formación</i> y marcando el paso 'To move in formation marking the pace' |
| Danzar 'to dance' | <i>Mover el cuerpo y los miembros con ritmo</i> , generalmente siguiendo el compás de una música. 'To move rhythmically the body and the limbs, usually following the beat of music.' |
| Flotar 'to float' | <i>Mantenerse en la superficie</i> de un líquido sin sumergirse – sostenerse en el seno de un fluido sin irse al fondo. 'Staying on the surface of a liquid without sinking - to sustain within a fluid without sinking' |
| Nadar 'to swim' | <i>Sostenerse flotando</i> sobre un líquido – <i>moverse sobre el agua</i> o sumergido en ella sin tocar el fondo. 'To sustain floating in a liquid – to move on the water surface, or immersed in water, without touching the bottom' |
| Bailar 'to dance' | '= danzar'. <i>Mover el cuerpo y los miembros con ritmo</i> , generalmente siguiendo el compás de una música. 'To move rhythmically the body and the limbs, usually following the beat of music.' |
| Arrastrarse 'to drag oneself' | <i>Moverse como los gusanos o los reptiles</i> , con el cuerpo tocando el suelo. 'To move like worms or reptiles, with the body touching the ground.' |
| Deslizarse 'to slip' | <i>Arrastrarse (Moverse como los gusanos o los reptiles)</i> sobre ... rozándolo suavemente. 'To move like worms or reptiles on top of ... touching it gently' |
| Tambalearse 'to stagger' | <i>Moverse algo o alguien muy acusadamente a un lado y a otro</i> manteniendo fijo algún punto, como si se fuese a caer. 'To move repeatedly to one side and to the other while maintaining a fixed point, as if the person/thing were going to fall.' |
| Cojear 'to limp' | Se aplica a una persona o animal al que <i>le falta un pie o pierna o los tiene defectuosos</i> , por lo que anda imperfectamente. 'It may be applied to a person, or animal, that has lost a foot or a leg, or has a defective foot/leg'. |
| Trotar 'to trot' | <i>Andar las caballerías con paso ligero</i> levantando a la vez el pie y la mano de distinto lado. 'The gait of a horse, in low speed, in which diagonal pairs of legs are lifted simultaneously'. |
| Gatear 'to crawl' | <i>Andar a gatas</i> (bebé). 'To crawl (baby)' |
| Pedalear 'to pedal' | <i>Mover con los pies los pedales</i> de la bicicleta u otra cosa semejante 'To move with the feet the pedals on the bicycle or a similar thing' |
| Renquear 'to limp' | <i>Cojear</i> como lo hace un renco 'To limp as the lame person does' |
| Corretear | <i>Ir corriendo de un lado para otro</i> como hacen los niños |

| | |
|------------------------------|---|
| ‘to run around’ | <i>‘To run from one side to another as the children do’</i> |
| Patinar ‘to skate’ | <i>Deslizarse sobre patines</i> <i>‘To glide on skates’</i> |
| Esquiar ‘to ski’ | <i>Patinar sobre la nieve con esquís</i> <i>‘To skate on snow with skis’</i> |
| Remar ‘to row’ | <i>Mover los remos para impulsar una embarcación</i> <i>‘Using the paddles to move a boat’</i> |

Table 2 Activity verbs with a Manner/means of motion profile. Source: DUE.

Table 3 summarizes the results of the quantitative analysis by ranking the verbs according to their attraction to the telic construction. The bolded line separates verb group A (with lexical association of directionality) from verb group B (with no lexical association of directionality):

| | Manner of motion verbs | Verb-tokens | Goal-oriented | Ratio of telicity (%) | <i>P</i> (FET) ²⁵ |
|-----------|--|-------------|---------------|-----------------------|------------------------------|
| 1 | Correr ‘to run’ | 3912 | 150 | 3.8 | 0 |
| 2 | Saltar ‘to jump’ | 1233 | 58 | 4.7 | 1.31e ⁻¹³⁴ |
| 3 | Volar ‘to fly’ | 995 | 46 | 4.6 | 2.58e ⁻¹⁰⁶ |
| 4 | Caminar ‘to walk’ | 2347 | 21 | 0.9 | 6.07e ⁻³⁴ |
| 5 | Andar ‘to walk’ | 3330 | 10 | 0.3 | 3.44e ⁻¹² |
| 6 | Rodar ‘to roll’ | 38 | 3 | 7.9 | 8.76e ⁻⁹ |
| 7 | Navegar ‘to sail’ | 340 | 4 | 1.2 | 5.58e ⁻⁸ |
| 8 | Deslizar(se) ‘to slip’ | 462 | 3 | 0.6 | 1.64e ⁻⁵ |
| 9 | Flotar ‘to float’ | 883 | 1 | 0.1 | 8.59e ⁻² |
| 10 | Arrastrar(se) ‘to drag oneself’ | 1265 | 1 | 0.1 | 1.21e ⁻¹ |
| 11 | Conducir ‘to drive’ | 1899 | 1 | 0.1 | 1.76e ⁻¹ |
| 12 | Renquear ‘to limp’ | 12 | 0 | 0 | 1 |
| 13 | Traquetear ‘to clatter’ | 16 | 0 | 0 | 1 |
| 14 | Cojear ‘to limp’ | 22 | 0 | 0 | 1 |
| 15 | Pedalear ‘to pedal’ | 24 | 0 | 0 | 1 |
| 16 | Patinar ‘to skate’ | 25 | 0 | 0 | 1 |
| 17 | Gatear ‘to crawl’ | 39 | 0 | 0 | 1 |
| 18 | Remar ‘to row’ | 53 | 0 | 0 | 1 |
| 19 | Esquiar ‘to ski’ | 58 | 0 | 0 | 1 |
| 20 | Trotar ‘to trot’ | 66 | 0 | 0 | 1 |
| 21 | Tambalear ‘to stagger’ | 69 | 0 | 0 | 1 |
| 22 | Corretear ‘to run around’ | 79 | 0 | 0 | 1 |
| 23 | Danzar ‘to dance’ | 80 | 0 | 0 | 1 |
| 24 | Nadar ‘to swim’ | 311 | 0 | 0 | 1 |
| 25 | Marchar ‘to march’ | 1149 | 0 | 0 | 1 |
| 26 | Bailar ‘to dance’ | 1283 | 0 | 0 | 1 |
| | | | | | |
| | Total | 19990 | 298 | 1.5 | |

Table 3 Spanish Manner of motion verbs in telic expressions. Source: Corpus del Español.

²⁵ FET = Fisher’s exact test.

4.3 Discussion

First of all, the data show, conclusively, that Manner of motion verbs in combination with goal-marking satellites of the type [V *a* NP] / ‘Manner of telic motion event’ are substantially apparent in a verb-framed language like Spanish, in contrast to Aske’s (1989) claim. One point five percent (1.5%; 298) of all verb tokens (19990) occurred in the specific telic Manner of motion expression type with the goal-marker *a*. Furthermore, Table 3 shows that the division of the verbs in terms of directionality associated to the verbal lexeme is closely correlated with a usage-based relative ordering of the verbs in terms of attraction to the telic construction. The bold line separates the verbs with a profile of associated directional motion (1-7) from those with a Manner/means of motion profile (8-26). The result of the statistic analysis of frequency – Fisher’s exact test – is very clear. The verb attraction to the telic construction depends systematically on (correlates with) the existence of associated directionality in the lexical meaning of the verb. *P*-values close to 0 (or the value 0) indicate relatively high attraction, while values relatively closer to 1 (or the value 1) mean no attraction. More specifically, Table 3 provides evidence that Spanish Manner of motion verbs with a lexical association of directionality are expected to be found in the telic [V *a* NP] - construction with a frequency that depends on the degree of associative directional meaning in the verbal lexeme. Conversely, it shows that Manner of motion verbs with no such association are relatively independent of the telic construction, and they are not expected to be used in this construction at all.

Notice, however, that the results of the statistic analysis reported in Table 3 are based on a limited set of verbs. As argued in Section 4.1, the absolute *p*-values of each verb are therefore not conclusive since the group of verbs included in the present study that occur in the telic construction in Corpus del Español is probably not completely exhaustive. This simplification affects the exactness of the absolute figures in Table 3, in the sense that we may expect the *p*-values to be higher in calculations that are based on a complete set of Manner of motion verbs in telic usage. Thus, the correct *p*-value for each verb can be expected to be indicating a slightly lower attraction to the telic construction. For instance, in terms of absolute *p*-values (at a significance level of $p < 0,001$), the verb *deslizarse* ‘to slip’ is apparently attracted to some degree to the telic construction ($p = 1.64e^{-5}$). However, the exact *p*-value for this verb is likely to be higher, indicating a relatively lower attraction.

The ranking of the verbs reflects not only the relative attraction of the verb to the telic construction; it is also sensitive to the entrenchment of the construction in combination with a specific verb. For instance, the ratio of the telic construction (= the telic usage in relation to other usages in Corpus del Español) for *rodar* is very high (7.9%). Still, its ranking is relatively low (6). The ranking of *caminar* is higher (4), and the ranking of *correr* is even higher (1), despite the relatively low ratios of the telic construction: 0.9% and 3.8% respectively. The higher ranking of *caminar* and *correr* in the telic construction is indicated by higher absolute frequencies, 21 and 150 respectively, which may be interpreted as a higher entrenchment in the grammar.

The verbs *arrastrar(se)* and *gatear* have a similar, though certainly not identical, lexical meaning (see Table 2). Correspondingly, they both have a Manner-profile ranking in Table 3. It is possible that the semantic profile of the lexeme *gatear* (‘to crawl’) exclusively is Manner, while *arrastrarse* (‘to drag oneself’) might be relatively more spatial in its semantic profile (‘to move like worms or reptiles, with the body touching the ground’). This possible difference is only attested by one token in the data; it is therefore not statistically significant. What is evident is that neither *arrastrarse* nor *gatear* show attraction to the telic construction. The measured difference between *deslizarse* (‘to slip’) and *arrastrarse* (‘to drag oneself’) in terms of attraction to the telic construction is partly due to the fact that the latter is more widely used in other constructions (verb tokens = 1265), which indicates that it has a broader meaning profile. It is, obviously, also due to the less tokens of telic usage (only one) attested for *arrastrarse*, but, again, we have to be careful when the data are very sparse.

Volar (‘to fly’) has a much higher ranking than *navegar* (‘to sail’). It is likely that this is due to the fact that the meaning of *navegar* more explicitly than *volar* refers to the activity of operating a

device for transportation (means of motion). The lexical profile of *volar* has a clear spatial association, and to a lesser degree, a connotation of means of motion. The ranking of *volar* therefore is expected to be higher. Interestingly, the verb *conducir* ‘to drive’ has an even more explicit reference to the operation of a vehicle, and a less spatial profile,²⁶ which is reflected in the lowest rank of attraction to the telic construction of these three verbs.

Another interesting observation is that the relatively high frequency of verbs like *saltar* (‘to jump’) in the telic construction does not have to be treated as a special case as suggested by Naigles *et al.* (1998) (see the discussion in Section 2). In the present analysis, *saltar* is highly ranked, as number 2 on the scale of attraction. It has a characteristic spatial-directional association in its lexical profile (see Table 1), which motivates the telic usage, and it is a frequent verb, which motivates high entrenchment in the telic construction (goal-oriented tokens = 58).

It may surprise that the frequent verb *marchar*, with a clear reference to a motion event, does not occur at all in the Manner of telic motion construction. The reason seems to be that while the activity-reading of this verb lexeme does not have inherent directionality, its telic reading certainly does. Hence, the verb has a telic reading whenever it is used in a goal-oriented syntactic context: *los soldados marcharon en el parque* ‘the soldiers **marched** in the park’, but *los soldados marcharon al campo de batalla* ‘the soldiers **went** to the battlefield’. This shows again that the intended meaning skeleton (of argument structure) is strongly dependent on the selected verbal lexeme.²⁷

Regarding Manner of motion verbs of the B-type (Manner/means of motion profile), the results of this quantitative analysis do not suggest that it is impossible, sporadically, to find occurrences, in large corpora, of this verb type in telic constructions, e.g. *nadar* (see Martínez Vázquez 2001; Pedersen 2013; among others):²⁸

- (19) **Nad-ó** a tierra y camin-ó a través de la isla (Spanish: CREA)
 swim-PST.3SG to shore and walk-PST.3SG across the island
 ‘He swam to the shore and walked across the island’

The results for the English control group of three Manner of motion verbs with a clear Manner profile (B-type) are shown in Table 4 and exemplified in (20)-(22):

| Manner of motion verbs | Verb tokens | Goal-oriented | Ratio of telicity (%) |
|------------------------|-------------|---------------|-----------------------|
| Float | 1230 | 134 | 10.9 |
| Dance | 2163 | 25 | 1.2 |
| Crawl | 764 | 201 | 26.3 |

Table 4 Control group. English Manner of motion verbs (B-type). Source: British National Corpus.

- (20) She felt as if she could **float** up into the starry night. (BNC)

- (21) ...he **danced** over to where Mait sat in the sedan chair. (BNC)

- (22) He **crawled** to a local hospital and was transferred to Ankara for treatment... (BNC)

²⁶ Even though the context in which this verb is used is clearly spatial.

²⁷ According to Beavers *et al.* (2010) and Levin *et al.* (2009), among others, the construction of telic motion events on the basis of manner of motion verbs requires special contexts that give rise to a goal interpretation.

²⁸ As pointed out in Section 2 (brought to my attention by an anonymous referee), even if telic usage is not indicated by the verb meaning *per se*, the productivity of the combination of verb and goal-phrase (e.g. *nadar*—*orilla/tierra*) may be a factor at work in determining the feasibility of having sporadic occurrences of the goal-phrase with *a*, in addition to the one with *hacia*.

The data for *dance*, which is a verb with a ‘Manner of motion’-profile with no directional association, indicate that this verb does occur in a telic construction (25 instances of goal-oriented motion), unlike what is indicated for the corresponding *bailar* in Spanish (see Table 3). Still, the ratio of telicity is low (1.2%), which is an indication that the lexical meaning of the verb may, to some degree, be a constraining factor in English. Interestingly, the data for *float*, with a clear ‘Manner of motion’-profile as well, are quite distinct. *Float* occurs relatively frequently in telic constructions (10.9%), again, in contrast to what has been found for the corresponding Spanish *flotar*. In fact, English Manner of motion verbs, with an exclusive Manner-profile, may be very frequent in telic constructions. In this usage, the telicity is not at all predicted by the verb meaning. The data for *crawl* (the ratio of telicity = 26.3%) makes a good example.

The Spanish data suggest that the telic [V *a* NP]-construction has to be licensed by the lexical meaning of the verb, cf. Table 3. The control data show that, conversely, in English no such verbal licence is required, though the telic construction may be lexically constrained to some degree. In sum, telic [V *a* NP]-constructions may only be combined with atelic Manner of motion verbs in Spanish when the telic meaning is predicted by the verb. The verb has no such strong and direct predictive role in comparable English constructions. It may be argued that this appears to be equivalent to saying that in Spanish, verbs may select for a goal complement, and that Spanish PPs cannot add a goal by themselves, while in English they can. If that were the point, my proposal would essentially not be different from the Talmian distinction of lexicalization between verb-framed and satellite-framed languages (see Section 2). However, this is not the point. While this study suggests that the basic skeleton of Spanish argument structure is rather systematically verb predictive, English argument structure does not seem to be systematically predictable, neither from the verb nor the satellite, as pointed out by many scholars, notably by Goldberg (e.g. Goldberg 1995, 2006). An explanation of this difference may be that the skeletal argument structure is provided by an independent diagram in English (of the type suggested by Goldberg) and that Spanish, conversely, has a lexically (verbally) organized basic skeleton. This meaning skeleton may in some variants – as in the case of manner of motion verbs like *correr* and *volar* (with an associated element of directionality) in the telic construction – be incomplete, marginal and unstable, and require a supportive diagram of telic motion, as instances of *variable type framing* (see Section 3.3.2). Such principles for clausal organization may turn out to be central when we have to explain different kinds of (frequently discussed) variation in expressions of complex events that do not fit into frameworks originated in the Talmian tradition.

5. Conclusion and theoretical perspectives

According to Aske (1989), the inability of Spanish to express Path outside the verb suggested by Talmy (1985), concerns only Manner of motion verbs in combination with telic Path phrases. Various studies on Spanish and typologically related languages have shown, however, that also this combination may occur in specific contexts. The present quantitative study has demonstrated that this is a relatively infrequent but regular pattern in Spanish. It has been shown that some Manner of motion verbs occur almost systematically in the telic construction.

The conclusion is that the constraints in Spanish do not seem to be centered in the telicity of the Path phrase. The question is rather whether there is an element of directional meaning associated with the lexical meaning of the verb. A comparably strong lexical restriction on the verb cannot be observed for English. Certain inter-linguistic and intra-linguistic variation in expressions of directional motion, which are usually approached by calling for still more fine-grained studies that refine the Talmian framework, are predicted in the suggested principles for a usage-based typology – *diagrammatic* (DORG) versus *lexical organization* (LORG). Particularly the suggested term *variable type framing* is central in the present study of telic motion. The use of Manner of motion verbs in combination with telic Path phrases is analyzed as incidences of *variable type framing* in Spanish, more specifically as *partial/marginal type framing*: the principal meaning skeleton (telic motion) is

only partially/marginally represented in the lexical structure of the organizing verb. The minimum condition for the organization of Spanish clauses is fulfilled: the principal meaning skeleton, X moves to Y, is encoded by a lexical (verbal) valence structure of directional motion and supported and completed by a diagram of telic motion. But at the same time, since it is only partially/marginally present in the verb meaning, it is dominated by the verbal meaning of Manner of motion. The required element of directionality is thus a less salient and distinguishable part of the verb meaning, which makes this verb type a less frequent candidate for the encoding of goal-oriented motion.

The theoretical underpinning of the present study is a typological characterization of Germanic versus Romance languages that draws on fundamental ideas of constructionist frameworks; particularly the general principle that human languages are built upon different types of constructions (e.g., Boas 2003; Croft 2001; Fillmore 1988; Goldberg 1995, 2006; Goldberg & Jackendoff 2004; Langacker 1987/1991; Ruiz de Mendoza Ibáñez & Mairal Usón 2008; among others). I suggest, in addition, that lexical constructions and schematic constructions do not play the same organizing role in different languages. Languages like English seem to be characterized by diagrammatic (i.e. schematic, constructional) organization in basic clause structure, and at a secondary level by lexical constraints. Conversely, languages like Spanish seem to be characterized primarily by lexical constraints, and draw only at a secondary level on diagrammatic encoding. This proposal implies that instead of positing the typological issue in question in terms of lexicalization patterns (e.g. Talmy 2000), parameter setting (e.g. Snyder 2001), or the availability of language specific construction types in the grammar (e.g. Croft 2001, 2010), typological principles anchored in generalizations over grammatical organization are suggested. Such typological principles classify each language, or language group, according to which kind of construction has the most prominent role in the organization of argument structure, and which kind has a secondary, supplementary status.

For future research, the incomplete list of Manner of motion verbs included in the present study requires further studies, and, evidently, similar quantitative studies of other “verb-framed” languages would complete the picture.

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